Evaluation worksheet

Science, Biology

Answer the following questions in the space provided. Remember to use complete sentences to demonstrate comprehension and understanding. Based on the labs you completed, answer the following questions: 1. Which solute(s) were able to diffuse into the right beaker from the left beaker? Which did not? Answer: The solute(s) that were able to diffuse Na+/Cl- , Urea, Glucose. The solute that didn’t was Albumin. 2. Explain the relationship between the rate of diffusion and the size of the solute.

What do you think changes in temperature such as cold/hot would have on the diffusion rate? Answer: The rate of diffusion of molecules depends on how soluble they are. The rate of diffusion depends on the size of the molecule in general, small molecules would pass through a membrane faster than larger molecules. As temperatures increase, molecular movement increases. As the movement increases, so will the diffusion rate as the molecules spread faster and faster.

The opposite would be true of colder temperatures. 3. Considering the osmosis lab, explain the relationship between fluid volume and osmotic pressure. Answer: Osmotic pressure is the measure of the tendency for osmotic flow to occur. Osmotic flow is from a solvent to a solution. This is the amount of pressure that needs to be applied from the outside to prevent osmosis. Fluid volume might be connected to osmotic pressure as the amount of pressure required to contain a specific volume of fluid in a container.

Both pressures are external. 4. Describe a situation that demonstrates diffusion and a situation that demonstrates osmosis occurring either in the

human body or in theenvironment. Answer: Diffusion is molecules moving from an area of high concentration to an area of low concentration. For example, ammonia molecules have a powerful odor. When a stopper is removed from a beaker containing ammonia, the molecules move from the area of high concentration diffusing themselves throughout the air.

This true as the odor becomes noticeable even in far reaches of the room where it was released. Osmosis occurs when molecules on one side of a semi-permeable membrane cross through the membrane. If the two solutions are of different concentrations, but the molecules of one are smaller and can diffuse the membrane, then we have osmosis or molecules moving from an area of higher concentration to an area of lower concentration. A common example is the absorption of water by the roots of a plant from the soil. 5.

After reviewing the four tissue types in the Histology Atlas, choose the tissue type you think is most important in the human body and explain your reasoning. Answer: There isn’t such thing as most important tissue. The reason we have different tissues is that we cannot exist without any of them. If I had to choose one it would be Epithelial Tissue because covers the whole surface of the body. It is made up of cells closely packed and ranged in one or more layers. This tissue is specialized to form the covering or lining of all internal and external body surfaces.